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ABSTRACT

A computerized curriculum monitoring system (CMS) was developed at Shelby State Community College (SSCC) in Tennessee to restrict student registration to courses for which they have completed the prerequisites and corequisites. The CMS is a subroutine of the on-line registration program, which matches students' course selections against their academic records to ensure that students are eligible for enrollment. To complete its routine, the computer program must interact with the following files: (1) the schedule of courses, a list of courses offered during a given term; (2) an academic record-keeping system, which contains information on students' personal characteristics, degree objectives, test scores, and courses completed; (3) the course title file, a table of all courses offered at SSCC, indexed by discipline and prerequisites/corequisites; (4) the inventory of degree plans tables, which lists course requirements for degrees offered at SSCC; and (5) the interactive registration system, which performs the prerequisites/corequisites check. When the system was first implemented in fall 1987, data collected during registration indicated that 21% of the students had not fulfilled the prerequisites or corequisites for the courses in which they were attempting to register, even though their registration forms indicated that they had undergone academic advising. (EJV)

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THE DEVELOPMENT OF A COMPUTERIZED CURRICULUM MONITORING SYSTEM TO ENSURE STUDENT SUCCESS

Curriculum and Program Planning Seminar

by

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A Practicum presented to Nova University in partial fulfillment of the requirements for the degree of Doctor of Education

Nova University

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ABSTRACT

Accountability for attainment of stated student educational goals and objectives has profoundly affected the thinking of higher education professionals. These professionals are concerned that the "open door" approach of access to higher education programs has become a "revolving door" to many students. This study focused on the basic problem of monitoring student progress toward stated educational objectives through utilization of a computerized curriculum monitoring system (CMS). It was suspected that many students dropped out of College due to improper academic advising resulting in course enrollments for which they were ineligible. This system is utilized to assist in ensuring student success toward stated educational objectives by restricting course enrollments of students to those for which the prerequisites and corequisites have been met.

The CMS is a subroutine in the on-line registration computer programming at Shelby State Community College. It is programmed to match course selections of students at registration against courses listed on the student's academic record to determine eligibility for enrollment.

Results of the study revealed that twenty-one percent of all students had been improperly advised to enroll in courses for which they were ineligible. The study focused on "preventive" intervention rather than the

"corrective" approach currently utilized by many higher education institutions. The study includes information relative to monetary savings realized by students, the College, and the State resulting from implementing the CMS. The essential recommendation was to implement the computerized CMS at all public two-year institutions of higher learning in the State.

INTRODUCTION

Colleges across the country have begun to search their souls in the wake of declining resources, increasing demands for accountability, and concerns that the "open door" has become a "revolving door." This has been particularly true at public community colleges where, until recently, open access has been the prevailing theme. This soul searching has led many institutions to concentrate their energies on more precise identification of student ability and objectives, and on monitoring student progress toward achieving those objectives. One of the basic problems in monitoring student progress toward objectives is the proliferation of students who attend part-time. These students drop out for a time, and return with no continuity established with the traditional system of curriculum tracking provided by one-on-one contact with an academic advisor continuously over the life of their academic program. Forty percent of the 12 million individuals enrolled in higher education in 1980 attended part-time (Keller, 1983:14). A larger number of part-timers attend college today, and more than half of all students will be attending part-time by 1990.

Because of these trends, there exists a need to provide close tracking of students to ensure satisfactory progress toward identified student educational objectives.

There are many intervention strategies available, but most are impractical because of scarce faculty and staff time.

Shelby State Community College (SSCC) in Memphis, Tennessee is an urban, state-supported community college that, in the wake of declining enrollments, resources, and demands for accountability, decided to investigate these urgent problems. Findings indicated that students are not being retained for a variety of reasons. Among those reasons is the problem of poor academic advising. Many students are failing courses and flunking out of school simply because they are not being properly advised. The administration at SSCC came to the conclusion that the key to academic success resides, in part, in proper course placement.

American higher education institutions, not unlike SSCC, face the challenge of maintaining viable enrollment levels while maintaining the quality of academic programs. This challenge at SSCC raises complex questions of policy and resource management. In response to recent declines in the number of graduating high school seniors, colleges and universities are increasingly committed to achieving enrollment stability through raising student retention rates. Although declines have not materialized as soon as predicted, SSCC and some other institutions are more vulnerable than others, and the dismal national demographic trends cannot be totally ignored. Because every recruited student is a potential dropout, a stopout, or transfer out,

internal recruitment and the streamlining of programs are essential to improving the rate of institutional persistence.

Most institutions face limited resources and must plan retention efforts along lines that will maximize retention at minimum expense. If it is to be efficient, resource allocation must follow guidelines that make pedagogical, procedural, and fiscal sense. At the same time, it must be recognized that the amount of student involvement and interaction in the educational experience is directly related to the student's likelihood of persistence. To this end, it should be clear that institutional policies, procedures, practices, structures, and climate directly affect the way student time is utilized and how involved students will become in academic pursuits.

The computerized CMS was designed with the above considerations in mind. Proper course placement, in this case, is the overriding factor affecting persistence and retention. Proper course placement simply means that students are allowed to enroll only in those courses for which they have met the stated prerequisites and corequisites. The crux of the problem was to find a way of ensuring that students enrolled in the appropriate courses without benefit of additional staff and financial resources. This led to the development of this practicum.

Therefore, the purpose of this practicum was to set forth the design of a computerized curriculum monitoring

system (CMS) to help ensure student success. This system helps to accomplish this through requiring students to enroll in courses needed for a degree in the sequential order of the curriculum in terms of prerequisites and/or corequisites.

The CMS was designed by student affairs personnel in consultation with academic affairs personnel and the college's computer programmers. The CMS was utilized during the Fall registration at SSCC and yielded astoundingly positive results. As students attempted to register for courses by having the courses input to the computer from their schedules, the CMS was initiated. The CMS is programmed to check students' transcripts to ensure that the appropriate prerequisite course(s) have already been taken. Concurrently, a check is made of current course input to ensure that the appropriate corequisite course is present, if applicable. Data entry operators recorded the number of students who presented incorrect choices of courses or courses for which they were ineligible. Although their registration forms indicated, by signature of the faculty advisor, that they had undergone academic advising, one point became crystal clear: faculty academic advising, for the most part, is a perfunctory operation that has little meaning for ensuring that students have indeed listed the appropriate courses for their respective programs of study. The administration believes that the number of students whose registrations were corrected may have a significant

positive impact on future enrollment levels and program completions at the college. Specifically, the retention rate is expected to be higher due to fewer academic probations and suspensions. Also, the attrition rate is expected to be lower due to fewer students dropping out due to frustration and ineligibility for financial aid due to low academic performance. Ultimately, the graduation rate is expected to be higher. Some faculty, having seen the results of this study, believe that teaching will become a more enjoyable occupation at SSCC due to more appropriately prepared students in their classes. Additionally, efforts are underway to redirect the academic advising efforts of faculty toward more meaningful intervention strategies that cannot be accomplished by the CMS.

BACKGROUND AND SIGNIFICANCE

Historically, colleges and universities across the country have utilized various approaches to attacking the problem of ensuring that students attain the competencies required for their chosen fields of study. Largely, these institutions have relied upon faculty to provide curriculum monitoring and guidance to students through the academic advising process. Others have relied upon centralized academic advising performed by non-teaching staff personnel. All too often, the efforts of either of these types of personnel have been thwarted and rendered ineffective due to (1) a lack of up-to-date transcript information on advisees,

(2) human error due to increased numbers of students assigned to them for advisement, and (3) increased complexity of academic advising resulting from the rising proliferation of part-time students and the utilization of inexperienced part-time faculty.

The development of this practicum is a natural outgrowth of the subject matter presented in the Curriculum and Program Planning Seminar in that it involves a systems approach to outcome accomplishment, and embodies the essential tenets of a goal-oriented educational environment. The entire design of the CMS generated by this practicum is based upon the concept of accomplishing prestated goals in a systematic and orderly fashion. At the same time, the CMS provides for systematic evaluation of the process in measurable terms at various intervals during the process. This is provided for in the system's capability to produce a computer-generated printout of objectives completed, underway, and lacking at any time desirable by the academic advisor.

Selection of incorrect courses negatively affects students' attainment of stated goals. An incorrect registration for a course that is not needed results in a longer time to complete an academic program. Because of scarce financial resources, some courses are only offered once per year on a first-come, first-served basis. In some instances, an incorrect course selection may result in the student's waiting an additional year until the course is

offered again. Translated into cost, it often means that students deplete financial aid eligibility long before program completion. It is believed that this is one of the major factors negatively affecting student retention and ultimately graduation.

Incorrect course selections have also had a negative effect on veterans who attend school on the G. I. Bill. The Veterans Administration (VA) will not subsidize courses other than those specified in the school's catalog as requirements for the VA-authorized program of study. Incorrect course selections made by the veteran student have often resulted in overpayment of veterans benefits that the student and/or the institution must pay back to the government. The net result is manifested in frustration of the student which often leads to dropping out of school. This, in turn, results in a net reduction in enrollments and tuition revenues for the College.

Reduced and sometimes "bare bones" budgets have made it necessary to utilize inexperienced, part-time faculty to advise students. These well-intentioned part-time faculty, in all too many cases, are hired "off-the-street" and therefore have little understanding of the College's rules and regulations regarding curricular requirements, rules on enrollments, or the vast array of State and Federal laws governing enrollments where certain financial benefit programs are involved.

The above are some of the examples of why it was absolutely necessary that the College seek an alternative to ensuring proper enrollments through the utilization of the existing faculty academic advising system. In light of the scarce financial resource base, the alternative sought had to meet the primary condition of "at no significant extra cost to the college."

The entire registration process was analyzed to determine its critical points as they relate to proper course enrollment. The most critical point in the registration process was determined to be the actual Course Input Station. This station is the point at which students actually commit themselves to sitting for courses by presenting to the terminal operators an advisor-approved registration form containing the course selections for that particular term. Therefore, the Course Input Station is the point at which the Computerized CMS comes into play. Once the computer's subroutine program for prerequisite and corequisite checking is activated by entering the student's identification number, the CMS is utilized to assist in assuring that all conditions have been met and properly documented for the courses selected. The idea of the key to academic success residing in proper academic placement, therefore, is true for the beginning of an academic program as well as throughout each stage of the curricular continuum.

The prestatement of goals and competencies in the CMS are represented in numeric form on tables that the computer reads during the registration process. These tables are constructed from course numbers representing actual courses required in a particular curriculum or program. These courses represent descriptions of the nature and scope of the subject matter and the expected attainable competencies to be gained by enrollees. All courses are approved through the college's Curriculum Committee of the Faculty Senate, the Academic Dean, and ultimately by the governing board, The Board of Regents of the State University and Community College System of Tennessee. The search for a better way to help ensure student academic success led to exploring the alternatives. Providing more and better trained faculty for academic advising was one of the alternatives. However, scarce fiscal resources rendered it impossible at this time or in the near future. Finally, through a review of the literature, it was discovered that with little financial output, existing computer systems at the college could be modified and enhanced to assist in accomplishing the task at hand.

A review of the literature revealed the essential components that would be required to build a computerized CMS at SSCC. Bays (1984:32-35) described one essential component of the CMS developed at SSCC. His system involves using a student course transcript to produce an advisement "worksheet," where courses taken are rearranged into

appropriate groupings on an easily read printout, thus enabling an advisor at a glance to ascertain the student's progress. This type of computer involvement can be called "passive" to distinguish it from the more desirable SSCC-type system where a student must plan a program of study in advance and then adhere to it. Bays' model is an important first start approach to curriculum monitoring, but is seriously lacking in value for assuring proper academic advising and ultimately proper course enrollment. The SSCC CMS which builds upon Bays' idea incorporates an interactive on-line utilization of various computer files to accomplish by machine what faculty advisors fail to mandate.
The systems are similar to the extent that they both require the explicit definition of specific requirements for course enrollments. However, Bays' system has no "stops" built into the system to "prevent" improper course enrollments, but rather has the capability of producing a report of improper enrollments "after the fact."

Spencer, in "Advisement By Computer (ABC): A Tool For Improving Academic Advising" (1982:169-79) described a computerized advising system. This system was utilized to assist advisors and students in keeping track of graduation degree requirements. Spencer states that the reasons for needing such a system arose from (1) the unavailability of faculty for advisement, (2) the lack of interest by the faculty in advisement, (3) the burden of forcing faculty to perform in an area outside of their area of training and expertise without adequate information and training support

systems, and (4) inaccurate and non-current academic information. Computer-assisted advisement, in the context of the system described by Spencer, is simply a computer program which stores and matches the degree requirements and the student's academic record. The report produced from this system is an evaluation report showing the graduation requirements and the student's progress in completing the requirements. The progress report may be printed in any number of variations or formats desired by the user. The report includes:

1. All requirements for graduation (university, general education, major, and specialization).
2. Specific courses which will satisfy the requirements.
3. The complete student record of all courses.
4. Individual requirements, waivers, or substitutions.
5. Additional credit for students such as advanced placement, CLEP, military credit, etc.
6. Statement of proficiency in completing the requirements.
7. Who to see and where to go for additional assistance.

Here again, the system herein described by Spencer embodies one of the essential components of the SSCC computerized CMS with respect to the use of tables outlining degree requirements and a complete record of courses completed by the student. The essential distinguishing feature of the SSCC computerized CMS is its capability to help "prevent" students from enrolling in incorrect courses before it actually occurs. The ABC described by Spencer is

an "after the fact" report that has no preventive features included.

Darling (1987:265-70) presented the essential components of a computerized degree audit system in "A Generalized Table-Driven Degree Audit Algorithm." In this article, Darling describes the system in terms of the structure of degree programs and logical operators. Degree programs usually are comprised of courses that are selected and combined together through logical rules. The courses usually carry units of credit (semester or quarter hours or an equivalent) and some specified total must be attained for graduation. The logical rules are normally expressed in a catalog as "Course 1 and course 2," or "Course 1 or course 2." In this arrangement, and or are the logical operators and are analogous to the well-known arithmetic operations of + - X / =. The arithmetic operators can be carried out without further instructions when embedded in tables of software packages like LOTUS 1-2-3. Including the logical operators as part of a table means that both the requirements for a degree and the operations used to decide if a student has met those requirements can be coded by non-technical staff.

Darling's system is comprised of the essential elements of degree checking "after the fact" through computer programming that is geared toward table-driven decision rules. Once the computer completes its routine, the net result is an assessment of requirements completed and not completed toward graduation. This system embodies

the essential logic comprising the SSCC CMS in that it utilizes tables and decision rules. The SSCC CMS differs, however, in that these routines are run during registration to ensure proper course enrollments on the "front end." The generalized nature of the methodology of these systems provide the power to meet diverse requirements. This is achieved through incorporating the logical operators in the tables. This approach reduces the dependence on analysts and computer programmers by providing the user with the means of describing the parameters and defining the conditions. For the SSCC CMS, these conditions are manifested in the prescribed prerequisite and corequisite decision rules embedded in the interactive on-line computer system's subroutines.

The information gained from reviewing the literature on other systems related to academic advising and degree auditing significantly influenced the direction of this study. By incorporating the logic presented in these documents, it was possible to conceive a system that would meet the specific needs of SSCC. As indicated above, most of the computer-assisted degree monitoring concepts focus on assessing past progress toward completion of degree requirements. By positioning these same logical concepts in the registration process, the SSCC CMS focuses on before-the-fact preventive guidance of students toward educational objectives. Great emphasis is needed on this thrust.

PROCEDURES

The computerized SSCC CMS is a computer programming subroutine that matches the degree requirements and the student's academic record as courses are selected during registration. Essentially, the computer is programmed to check prerequisite and corequisite course conditions on the student's transcript against the course specifications listed on a table of course requirements for the particular degree and major codes appearing on the student's record. In order to complete its routine, the computer program must interact with the following files: (1) The Schedule of Courses, (2) The Academic Record-Keeping System, (3) The Course Title File, (4) The Inventory of Degree Plans Tables, and (5) The Interactive Registration System. A computer printout of the subroutine utilized in the SSCC CMS is included as Appendix B of this practicum. The several components of the CMS are described below.

Developing The Conceptual Framework

Personnel from the Computer Center, Academic Affairs, and Student Affairs (Dean's Office, Admissions and Records, and Center for Advising and Counseling) met to discuss the possibility of developing the computerized curriculum monitoring concept. A presentation was given on similar systems that contained some of the components desirable for the system conceptualized. After a series of

meetings of this group, it was decided that the following on-line components were required to create the system:

1. An Academic Record-Keeping System.
2. A Course Title File.
3. A Schedule of Courses File.
4. An Inventory of Degree Plans Tables.
5. An Interactive Registration System.

These on-line components of the CMS are discussed, in turn, below:

The Academic Record-Keeping System

The on-line academic record-keeping system contains a complete description of students' demographic data, degree objectives, test scores, and courses completed. These data elements are described in alphabetic and numeric codes that match the coding in other components of the CMS. The record-keeping system is a complete historical depiction of all courses passed and failed with the credit hours earned.

The Course Title File

The on-line course title file is comprised of a complete table of all courses offered at the institution. This file is indexed in alphabetic and numeric data elements by discipline, and coded for prerequisite and/or corequisite enrollment restrictions that match the decision indicators built into the on-line registration system.

The Schedule of Courses File

The schedule of courses file is comprised of a complete table of all courses offered at the institution in a given term. This file, like the Course Title File, is indexed in alphabetic and numeric data elements by discipline, and coded for prerequisite and/or corequisite enrollment restrictions that match the decision indicators built into the on-line registration system. This file differs from the Course Title File in that it is term-specific, and contains additional data elements pertinent to other registration operations. These additional elements include the enrollment capacity, section, location, times, and instructor of the course along with certain accounting, payroll, and personnel data.

The Inventory of Degree Plans Tables

The inventory of degree plans tables contains a series of tables of course requirements for degrees offered at the institution. The tables are coded in alphabetic and numeric data elements that match the coding in other components of the CMS. These tables are also indexed by year and degree taxonomy to allow for checking of degree requirements that may change for the same major from one year to another. It should be noted that the decision indicators in the on-line registration program serve to interactively activate these tables through conditional statements.

The Interactive Registration System

The interactive registration system is the heart of the computerized CMS, for it contains the subroutine that does the job of computerized curriculum monitoring. The subroutine (Appendix B) that drives the CMS is a computer program that matches course selections of students against their historical record, the schedule of courses file, and the degree plan table for their designated degree and major as listed in the academic record-keeping system.

As indicated in Appendix B, this subprogram will check prerequisite and corequisite courses and send a message to the main on-line registration program to reflect the correct reason for not allowing the student to enroll in a given course. Restrictions are also built into this subroutine for enrollment limitations related to remedial and developmental studies requirements. Standard messages appear on the screen of the registration terminals indicating the exact nature of the rejection whenever a course selection is disallowed. When this message appears, the student must return to his/her advisor to make a correct course selection or obtain an "Override Form" from the advisor indicating that an enrollment exception has been approved. These forms are kept on file and entered as an exception on the student's individual degree plan after registration. Otherwise, the computer would continue to disallow future enrollments based on the existence of the same condition.

RESULTS

Data collected during the Fall, 1987 registration utilizing the computerized CMS indicated that twenty-one percent of the students attempting to register had not met the required prerequisites and/or corequisites for the courses selected. Six terminal operators recorded the number of rejections occurring at their respective terminals. A tally sheet, Appendix A, was designed for this purpose. The tally sheets were check-marked each time a rejection occurred, totaled at the end of each day of regular registration, and turned in to the Dean of Student Affairs' Office for analysis.

The Dean of Student Affairs and Records Office Staff analyzed the tally sheets by comparing the rejected students' transcripts to the prerequisites and corequisites printed in the SSCC catalog. The results of this analysis revealed that all of the enrollment rejections were valid, thereby rendering the CMS 100 percent accurate.

End of day summary registration statistics were utilized to determine the total number of students who registered during the period of analysis. The results of the data collected are presented in Table 1 below.

Table 1

The Number of Enrollment Rejections

by Terminal Operator

Terminal Operator	Number Rejected
1	79
2	85
3	62
4	68
5	50
6	83
Totals	427*

*Out of 2,065 students registered.

As indicated above, six terminal operators were utilized to record the number of students rejected by reason of ineligibility for courses selected. During the regular registration period, a total of 427 students were rejected. This number of rejections was 21 percent of the 2,065 total students registered.

DISCUSSION, IMPLICATIONS AND RECOMMENDATIONS

Translated into cost to students, a possible four hundred and twenty-seven students saved $200 each ($85,400) by not having to attend an extra term due to improper course enrollments. Translated into cost for the State, a possible savings of approximately $3,800 per student ($1,622,600) was realized by not having to subsidize an extra term of study due to improper course enrollments. Translated into gains for the College, a possible twenty-one percent increase in the retention rate due to proper course enrollment, and a lowering of the attrition rate due to a decrease in the number of students placed on academic probation, suspension, or dismissal was realized. The implementation of the computerized CMS also resulted in fewer students dropping and adding courses due to improper course selections.

Therefore, the implications of the implementation of the computerized CMS at SSCC are clear. The utilization of the CMS has resulted in immense monetary savings for students, the college, and the State of Tennessee. The utilization of the CMS has also provided the impetus and support needed to justify the redirection of human and financial resources to more positively affect the College's overall operation. Results of previous similar systems from which the CMS emerged have failed to yield these positive short-term results. This is due largely to their emphasis

on repairing damage already done rather than preventive intervention.

In light of declining enrollments, soaring attrition rates, and scarce human and financial resources across the State, this computerized CMS is recommended for implementation at all two-year public institutions. Further tracking of the results of this study is recommended at SSCC to determine the impact on the graduation rate, long-term retention rate, and improvements in instruction and support services.

Finally, the positive results of implementing the computerized CMS cannot be overemphasized. Concerns that the "open door" has become a "revolving door" are supported by the statistics on college dropouts nationwide. The computerized CMS is but one step in the direction of alleviating this problem at one institution through helping to ensure satisfactory progress toward identified student educational objectives. It is hoped that the larger issues faced by institutions of higher learning will, in some way, be helped by utilizing this same methodology in attacking the problems.

BIBLIOGRAPHY

Bays, Carter. "Computer-Aided Advisement Language at the University of South Carolina." College and University, 60:32-36, 1984.

Darling, Alexander L. "A Generalized Table-Driven Degree Audit Algorithm." College and University, 62:265-70, 1987.

Keller, George. Academic Strategy: The Management Revolution in American Higher Education. Baltimore, Maryland: The Johns Hopkins University Press, 1983.

Spencer, R. W., et al. "Advisement by Computer (ABC): A Tool for Improving Academic Advising." College and University, 57:169-74, 1982.

APPENDIX A

SAMPLE TALLY SHEET FOR ENROLLMENT REJECTIONS

SSCC CMS

TALLY SHEET

TERMINAL #_____

Fall 1987 REGISTRATION
Dean of Student Affairs
B-230

DATE

9/2

9/2 TOT

9/3

9/3 TOT

9/4

9/4 TOT

OPERATOR INITIALS

No Tallying Below THIS LINE

INSTRUCTIONS: This sheet is to be used to record the number of students that are stopped at the course input terminals because PREREQUISITES or COREQUISITES HAVE NOT BEEN MET only. Do not include other holds in the tally.

Each operator must complete this sheet at the end of each day of regular registration, turn it in to Pat Moore. Pat Moore will check the sheets for completeness and turn them in at B-230 the following morning.

Accuracy is, as usual, m o s t i m p o r t a n t /fbh

APPENDIX B

COMPUTER SUBROUTINE PROGRAM FOR PREREQUISITE AND COREQUISITE CHECKING

```
IDENTIFICATION DIVISION.
PROGRAM-ID.    CHLCRSE.          CURRICULUM MONITORING SYSTEM

*  ****************
*
*  This subprogram will check Pre-requisite courses and send a
*  message to the main program to reflect the correct reason for
*  not allowing the student to enroll in a given course.
*  This program will check first-time college,
*                          admission status,
*                          initial entry date,
*                          Basic Tag,
*                          AHP and ACT test scores,
*                          date of birth,
*                          pre-requisite courses and
*                          grades on CCF file.
*  Error Code:
*      1 - Pre-requisite course required.
*      2 - AHPP test required (Writing or Reading or Math).
*      3 - Duplicate course.
*      4 - Must enroll Remedial/Developmental courses First.
*      5 - Not permitted to enroll Remedial/Developmental courses.
*      6 - Readmission test required.
*      7 - Failed readmission test.
*      8 - Suspended for one quarter due to failing a R/D course twice.
*
*  ****************

ENVIRONMENT DIVISION.
CONFIGURATION SECTION.
SOURCE-COMPUTER.      VAX.
OBJECT-COMPUTER.      VAX.
SPECIAL-NAMES.
INPUT-OUTPUT SECTION.
FILE-CONTROL.
    SELECT CCF ASSIGN TO "CCF"
               ORGANIZATION IS INDEXED
               ACCESS IS RANDOM
               RECORD KEY IS CCFSSN-KEY
               FILE STATUS IS CCF-STATUS.
    SELECT PRF ASSIGN TO "PRF"
               ORGANIZATION IS INDEXED
               ACCESS IS RANDOM
               RECORD KEY IS PRF-REQ-KEY
               FILE STATUS IS PRF-STATUS.
    SELECT RDMWAP ASSIGN TO "DR$USER:[JOHNS]RDMWAP"
                  ORGANIZATION IS INDEXED
                  ACCESS IS RANDOM
                  RECORD KEY IS RDM-KEY
                  FILE STATUS IS RDM-STATUS.
    SELECT TERM  ASSIGN TO "DR$PROG:[REGPD]TERMCARD".
DATA DIVISION.
FILE SECTION.
COPY "DR$PROG:[REGPD]CCFFD.LIB".
COPY "DR$PROG:[REGPD]PRFREC.LIB".
COPY "DR$PROG:[REGPD]RDMWAP.LIB".
FD  TERM  LABEL RECORDS ARE STANDARD.
01  TERM-REC        PIC X(4).
WORKING-STORAGE SECTION.
```



```
01  WS-AREA.
    05  ROW            PIC 99    COMP VALUE 0.
    05  COL            PIC 99    COMP VALUE 0.
    05  WS-CUR-HRS     PIC 999V9.
    05  COL-HRS        PIC 999V9.
    05  SSCC-HRS       PIC 999V9.
    05  TRAN-HRS       PIC 999V9.
    05  MATH-HRS       PIC 99V9.
    05  ENG-HRS        PIC 99V9.
    05  READ-HRS       PIC 99V9.
    05  RD-HRS         PIC 99V9.
    05  CCF-SW         PIC 9.
    05  PRF-SW         PIC 9.
    05  PASS           PIC 9.
    05  RD-PASS        PIC 9.
    05  RD-REQ         PIC 9.
    05  RD-STAND       PIC 9.
    05  RDM-STAND      PIC 9.
    05  REPEAT         PIC 9.
    05  CNT            PIC 9.
    05  RD-STUDENT     PIC 9.
    05  RET-STUDENT    PIC 9.
    05  TST            PIC 9.
    05  TST-PASS       PIC 9.
    05  TST-RD         PIC 9.
    05  I              PIC 999.
    05  J              PIC 999.
    05  JJ             PIC 9.
    05  K              PIC 9.
    05  KK             PIC 9.
    05  L              PIC 99.
    05  R              PIC 9.
    05  T              PIC 9.
    05  X              PIC 999.
    05  CUM-GPA        PIC 9V99.
    05  DEPT-SM        PIC XXX.
    05  CRSE-SM        PIC XXX.
    05  DEPT-HLD       PIC 999.
    05  CRSE-HLD       PIC 999.
    05  CRHR-HLD       PIC 99V9.
    05  CRHR-RHLD      PIC 99V9.
    05  DEPT-RD        PIC 999.
    05  CRSE-RD        PIC 999.
    05  CRHR-RD        PIC 99V9.
    05  PRE-QTR        PIC 9.
    05  PRE-YR         PIC 99.
    05  CCF-STATUS     PIC XX.
    05  PRF-STATUS     PIC XX.
    05  RDM-STATUS     PIC XX.
    05  ZIDATE         PIC 9(6).
    05  DOBDATE        PIC 9(6).
    05  WDOB           PIC 9(6).
    05  WYEAR          PIC 99.
    05  CRSE70         PIC 9.
    05  CRSE71         PIC 9.
    05  CRSE80         PIC 9.
    05  PRF-FOUND      PIC 9.
    05  PRF-TYPE       PIC 9.
    05  WCAT           PIC X.
    05  RDM-FOUND      PIC 9.
    05  TERM-HLD       PIC 9.
    05  YR-HLD         PIC 99.
01  WACT.
    05  ACT1           PIC 99.
    05  ACT2           PIC 99.
    05  ACT3           PIC 99.
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    05  ACT4          PIC 99.
    05  ACT5          PIC 99.
01  RDM-MAPSCORES.
    05  WRWRITING     PIC 9.
    05  WRREADING     PIC 99.
    05  WRLOGICAL     PIC 99.
    05  WRALG-IN      PIC 99.
    05  WRALG-EL      PIC 99.
    05  WRARITH       PIC 99.
    05  WRFRACTION    PIC 99.
01  RDM-TABLE.
    05  TABLE1.
        10  FILLER  PIC X(5)  VALUE "36237".
        10  FILLER  PIC X(5)  VALUE "     ".
        10  FILLER  PIC X(5)  VALUE "     ".
    05  TEST-NO REDEFINES TABLE1 OCCURS 3 TIMES  PIC X(5).
01  ACCEPT-AREA.
    05  ENTRY-DATE  PIC 9(4).
    05  ENTRY-DT REDEFINES ENTRY-DATE.
        10  ENTRY-MONTH  PIC 99.
        10  ENTRY-YEAR   PIC 99.
01  COURSE-TABLE.
    05  T-TABLE  OCCURS 8.
        10  T-DEPT1    PIC XXX.
        10  T-CRSE1    PIC XXX.
        10  T-CRHR1    PIC 99V9.
        10  T-TITLE    PIC X(20).
        10  T-DEPT2    PIC XXX.
        10  T-CRSE2    PIC XXX.
        10  T-CRHR2    PIC 99V9.
01  ENROLL-TABLE.
    05  R-TABLE  OCCURS 20.
        10  R-DEPT     PIC XXX.
        10  R-CRSE     PIC XXX.
        10  R-CRHR     PIC 99V9.
        10  R-TITLE    PIC X(20).
01  D-MSGE1.
    05  FILLER         PIC X(70) VALUE
        "You have not met the pre-requisites of the courses for which".
01  D-MSGE2.
    05  FILLER         PIC X(70) VALUE
        "you wish to register. Please see your advisor or a counselor.".
01  D-MSGE3.
    05  FILLER         PIC X(19) VALUE "Course duplicate, ".
    05  PCRSE          PIC X(20).
01  D-MSGE4.
    05  FILLER         PIC X(70) VALUE
        "You must enroll Remedial/Developmental courses FIRST.".
01  D-MSGE5.
    05  FILLER         PIC X(70) VALUE
        "You are not permitted to enroll Rem/Dev courses.".
01  D-MSGE6.
    05  FILLER         PIC X(70) VALUE
        "Suspended for one quarter due to failing a R/D course twice.".
01  D-MSGE7.
    05  FILLER         PIC X(70) VALUE
        "You must take readmission test. Please see an advisor.".
01  D-MSGE8.
    05  FILLER         PIC X(70) VALUE
        "Your RDM score does not permit you to re-enroll at Shelby State.".
01  D-MSGE9.
    05  FILLER         PIC X(70) VALUE
        "Restricted to enroll in R/D courses failed twice only.".
01  DATE-ARRANGE.
    05  WYR            PIC 99.
    05  WMH            PIC 99.
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    05  WDY            PIC 99.
01  HDTIM.
    05  HHR            PIC 99.
    05  HMN            PIC 99.
    05  FILLER         PIC 9999.
01  WS-SMREC.
    05  SMSS           PIC 9(9).
    05  SMNAME         PIC X(25).
    05  SMFTC          PIC X.
    05  SMCATGORY      PIC X.
    05  SMCLASS        PIC X.
    05  SMDOB          PIC S9(6)   COMP-3.
    05  SMSEX          PIC 9.
    05  SMCITZN        PIC 9.
    05  SMSTATE        PIC XX.
    05  SMCNTY         PIC S999    COMP-3.
    05  SMRES          PIC 9.
    05  SMDY-NGT       PIC 9.
    05  SMFAMINC       PIC 9.
    05  SMHTRNREC      PIC X.
    05  SMDEPDNT       PIC 99.
    05  SMVET          PIC 9.
    05  SMHANDCP       PIC X.
    05  SMGEDAVG       PIC S99V9   COMP-3.
    05  SMINITENTY     PIC S9(4)   COMP-3.
    05  SMCURRENTY     PIC S9(4)   COMP-3.
    05  SMCDATE        PIC S9(6)   COMP-3.
    05  SMDTEREQ       PIC X(4).
    05  SMTFICE        PIC S9(5)   COMP-3.
    05  SMTAG.
        10  SMQTRTAG OCCURS 6  PIC 9.
    05  SMACT-INACT    PIC 9.
    05  SMEXEMP        PIC XX.
    05  SMRATE         PIC S9V99   COMP-3.
    05  SMELET         PIC X.
    05  SMLANG         PIC X.
    05  SMADMCD     05  SMPROB        PIC X.
    05  SMTERM         PIC 9.
    05  SMTERMYR       PIC 99.
    05  SMEALREC       PIC X.
    05  SMLETGS        PIC X.
    05  SMDEG          PIC XXX.
    05  SMMAJ          PIC XXX.
    05  SMBASIC-TAG    PIC X.
    05  SMADV          PIC X(5).
    05  SMCAMPUS       PIC X.
    05  SMQRTERTAG   PIC 9.
    05  SMQRTAG        PIC 9.
    05  SMJTPA         PIC X.
    05  SMSELSRV       PIC X.
    05  SMWRITING      PIC 9.
    05  SMREADING      PIC 99.
    05  SMLOGICAL      PIC 99.
    05  SMALGEB.
    05  SMFLOGICAL     PIC 99.
    05  SMFALG-IN      PIC 99.
    05  SMFALG-EL      PIC 99.
    05  SMFARITH       PIC 99.
    05  SMACT          PIC X.
    05   COMP-3.
    05  SMOWSP-MAX     PIC S9(4)V99 COMP-3.
    05  SMOWSP-FYTD    PIC S9(4)V99 COMP-3.
    05  SMOWSP-YTD     PIC S9(4  SMPREMATH     PIC 99.
    05  SMFAFRACTION   PIC 99.
    05  FILLER         PIC X(13).
    05  SMFONE         PIC S9(7)   COMP-3.
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        05  SMAFRACTION    PIC 99.
        05  SMPERMADDR.
            10  SMFADD.
        05  SMUPROB        PIC 9.
        05  FILLER         PIC X(2).
        05  SMHRSWRK       PIC 99.
        05  SMFAIDAMT      PIC S9(4)    COMP-3.
        05  SMUHRSCOMP     PIC S999V99  COMP15  SMCALL          PIC 9999.
            10  SMDEPT     PIC S999     COMP-3.
            10  SMCRSE     PIC S999     COMP-3.
            10  SMSE         10  SMCRSETAG PIC 9.
            10  SMCANCEL   PIC 9.
            10  SMTIME.
                15  SMTIME1   PIC 99.
                15  SMTIME2   PIC 99.
                15  SMTIME3   PIC 99.
                15  SMTIME4   PIC 99.
                15  SMAM      PIC X.
            1 SMELDG           PIC 9.
            10  SMROOM        PIC XXXX.
            10  SMGRADE       PIC X.
            10  SMADATE       PIC S9999  COMP-3.
            10  SMTITLE       PIC X(20).
    LINKAGE SECTION.
    01  LK-SMREC           PIC X(1971).
    01  LK-RD              PIC 9.
    01  LK-QTR             PIC 9.
    01  LK-DEPTCRSE        PIC 9(6).
    01  LK-HRS             PIC 99V9.
    01  LK-MSGE1           PIC X(70).
    01  LK-MSGE2           PIERROR PROCEDURE ON CCF.
    PRF-BUSY SECTION.
        USE AFTER STANDARD ERROR PROCEDURE ON PRF.
    RDM-BUSY SECTION.
        USE AFTER STANDARD ERROR PROCEDURE ON RDMAAP.
    END DECLARATIVES.
    START-HERE SECTION.
    010-START.
        ACCEPT  TO WYEAR.
        SUBTRACT 21 FROM WYEAR.
        READ TERM  AT END    CLOSE TERM.
        MOVE TERM-REC(1:4)  TO 21DATE(3:4).
        MOVE WYEAR          TO 21DATE(1:2).
        CLOSE TERM.

        MOVE 0 TO LK-RD X CCF-SW TST TST-PASS TST-RD RD-STUTCRSE(1:3)  TO PRF-DEPT DEPT-HLD.
        MOVE LK-DEPTCRSE(4:3)  TO PRF-CRSE CRSE-HLD.
        MOVE LK-HRS            TO PRF-CRHR CRHR-HLD.
        COMPUTE CUM-GPA = SMQPTEARN / SMGRPTHRS
              ON SIZE EAND SMLOGICAL = 99 AND
           SMALGEBRA-IN = 99 AND SMALGEBRA-EL = 99 AND
           SMARITHMETIC = 99 AND ACTS < 16
                              MOVE 0 TO TST
           ELSE               MOVE 1 TO TST.
        IF (SMWRITING > 3 AND < 6) AND
                         PERFORM 300-FTC-STUDENT THRU 300-FTC-EXIT
                              GO TO 100-CLOSE-FILES.
        IF CCF-STATUS = "90" OR "92" GO TO 100-READ-CCF.
        IF CCF-STATUS NOT =
    100-CLOSE-FILES.
        PERFORM 130-CHECK-DUP THRU 130-DUP-EXIT.
        CLOSE CCF PRF RDMAAP.
    EXIT-PARAGRAPH.
        EXIT PROGRAM.

    100-READ-PRF.
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        READ PRF  INVALID KEY  MOVE 0 TO PRF-FOUND
                               GO TO 100-PRF-EXIT.
        IF PRF-STATUS = "90" OR "92"    GO TO 100   MOVE 1 TO PRF-FOUND.
    100-PRF-EXIT.    EXIT.

    110-CHECK-HRS.
        ADD 1 TO X.
        IF X > 25    MOVE 0 TO X    GO TO 110-ENROLL.
        IF SMDEPT(X) = 0 OR SMDEPT(X) NOT NUMERIC  MCRHR(X) = 0      GO TO 110-CHECK-HRS.
        ADD SMCRHR(X) TO WS-CUR-HRS.
        ADD 1 TO I.
        MOVE SMDEPT(X)   TO R-DEPT(I).
        MOVE SMCRSE(X)   TO R-CRSE(I).
        MOVE SMCRHR(X)   TO R-CRHR(I).
        MOVE SMTITLE(X)  TO R-TITLE(CRHR-HLD TO R-CRHR(I).
        MOVE I TO L.
    110-HRS-EXIT.    EXIT.

    120-INITIALIZE-ENROLL-TABLE.
        MOVE 0 TO I.
    120-A.
        ADD 1 TO I.
        IF I > 20    MOVE 0 TO I    GO TO 120-TABLE-EXIT.
        MOVE SPACES TO R-DEPT(I) R-CRSE(I) R-TITLE(I).
        MOVE 0 TO R-CRHR(I).
        GO TO 120-A.
    120-TABLE-EXIT.    EXIT.

    130-CHECK-DUP.
     ERROR MESSAGE
                              MOVE SPACES TO PCRSE.
                              MOVE R-TITLE(I) TO PCRSE
                              MOVE D-MSGE3 TO LK-MSGE3
                              GO TO 130-DUP-EXIT.
        GO TO 130-A.
    130DM.
        SUBTRACT 1 FROM J.
        IF J < 1    GO TO 130-CHECK-RD.
        IF TEST-NO(J) = SPACES   GO TO 130-RDM.
        MOVE TEST-NO(J) TO RDM-TEST.
    130-RDM-FILE.
        READ RDMAAP  INVALIDMOVE RDM-READ          TO WRREADING.
        MOVE RDM-LOG           TO WRLOGICAL.
        MOVE RDM-IN            TO WRALG-IN.
        MOVE RDM-EL            TO WRALG-EL.
        MOVE RDM-ARITH NOT = TERM-HLD   GO TO 130-RDM-EXIT.
        IF DEPT-CCF(I) = 008 OR 011 OR 025   NEXT SENTENCE
          ELSE                               GO TO 130-B.
        IF DE-C.
        SUBTRACT 1 FROM J.
        IF J < 1    GO TO 130-B.
        IF DEPT-CCF(J) NOT = 008 AND 011 AND 025   GO TO 130-C.
        IF GRADE-CCF(J) = "A"R-CCF(I)
                       MOVE 1 TO RDM-STAND
                       GO TO 130-RDM-EXIT.
        GO TO 130-C.
    130-RDM-EXIT.    EXIT.

    200-PRF-PASS.
        MOVE 0 TO PASS.
        IF (TST-PASS = 1 OR (SMBASIC-TAG = "B" OR "C" OR "N")) AND
          ((PRF-PDEPT(1) > 007 AND < 087) OR
           (PRF-PDEPT(2) > 007 AND < 087) OR

           IF (DEPT-CCF(X) = SPACES) OR
           (CRSE-CCF(X) = SPACES) OR
           (CRHR-CCF(X) = 0)          GO TO 200-M.
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    IF (GRADE-CCF(X) = "A" OR "B" OR "C" OR "D" OR "E" OR "S")
                    CRHR-RHLD   = PRF-PCRHR(T)
                    MOVE 1 TO PASS    GO TO 200-PRF-PASS-EXIT.
    GO TO 200-A.
200-PRF-PASS-EXIT.    EXIT.

210-CHECK-PRF.
    MOVE 0 TO PASS.
    IF (TST-PASS = 1 OR (SMBASIC-TAG = "B" OR "C" OR "N")) AND
       (PRF-PDEPT(T) = 001 AND < 087  GO TO 210-PRF-EXIT.
    IF PRF-PTYPE(T) = SPACES          GO TO 210-A.
    IF PRF-PTYPE(T) NOT = "1" AND "3"   GO TO 210-A.
    PERFORM 550-COURSE-PROGRESS THRU 550-PRO < 41.99
                    MOVE 1 TO PASS
                    GO TO 220-RD-PRF-EXIT.
220-REPEAT.
    ADD 1 TO X.
    IF X > CRSE-CNT    GO TO 220-CONT.
    IF TRCRT(PHR-HLD TO PRF-CRHR.
    PERFORM 100-READ-PRF THRU 100-PRF-EXIT.
    IF PRF-FOUND = 0    GO TO 220-RD-PRF-EXIT.
    IF  TST-PASS = 1 OR (SMBASIC-TAG = "B" OR "C" OR "N" )-CCF(X) = SPACES  MOVE CRHR-CCF(X)
       ELSE                    MOVE SCRHR-CCF(X) TO CRHR-RHLD.
    IF DEPT-CCF(X) = PRF-PDEPT(T)  AND
       CRSE-CCF(X) = PRF-PCRSE(T)  AND
       CRHR-RHLD   = PRF-PCRHR(T)
                    MOVE 1 TO PASS
                    GO TO 220-RD-PRF-EXIT.
    GO TO 220-B.
220-RD-PRF-EXIT.    EXIT.

225-RD-PRF.
    MOVE 0 TO PASS PRF-SW.
    IF DEPT-HLD > 086    GO TO 225-RD-PRF-EXIT.
    MOVE DEPT-HLD TO PRF-DEPT.
    MOVE CRSE-HLD TO PRF-CRSE.
    MOVE CRHR-H GO TO 225-RD-PRF-EXIT.
    MOVE 0 TO T.
225-A.
    ADD 1 TO T.
    IF T = 3 AND PRF-SW = 0    MOVE 1 TO PASS
                               GO TO 225-RD-PRF-EXIT.
    IF T > 3    GO TO 225-RD-PRF-EXIT.
    IF PRF-PTYPE(T) = SPACES    GO TO 225-A.
    IF PRF-PTYPE(T) NOT = "1"   GO TO 225-A.
    MOVE 1 TO PRF-SW.
    GO TO 225-A.
225-RD-PRF-EXIT.    EXIT.

230-CCF-MOVE 03 TO ENTRY-MONTH
       ELSE IF TERM-HLD = 5   MOVE 06 TO ENTRY-MONTH
       ELSE IF TERM-HLD = C   MOVE 07 TO ENTRY-MONTH.
    IF (ENTRY-YEAR =(1) = 072   GO TO 230-A.
    IF DEPT-CCF(I) = 008 OR 011 OR 025
                               ADD CRHR-CCF(I) TO RD-HRS.
    IF DEPT-CCF(I) < 087   GO TO 230-A.
    IF DEPT-CCF(I) = 111          ADD CRHR-CCF(I) TO TRAN-HRS.
    ADD CRHR-CCF(I) TO COL-HRS.
    GO TO 230-A.
230-REPEAT.
    ADD 1 TO I.
    IF I > CRSE-CNT        GO TO 230-CCF-HRS-EXIT.
    IF DEPT-CCF(I) < 087   GO TO 230-REPEAT.
                           GO TO 230-CCF-HRS-EXIT.
    GO TO 230-REPEAT.
230-CCF-HRS-EXIT.    EXIT.
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*   ******************
*   Check readmission test scores and courses failed twice.
*   RDM-STAT
                IF RDM-FOUND = 0 OR RDM-STAND = 0    GO TO 240-RDM-EXIT.
240-WRITING.
    IF RDM-WRITING = 3    GO TO 240-READING.
    IF RDM-WCRSE = 070 AND RDM-WRITING = 2   GO TO 240-READING.
    IF RDM-WCRSE = 071 AND RDM-WRITING       GO TO 240-MATH.
    IF RDM-RCRSE = 080 AND RDM-READ   35 AND RDM-LOG > 35
                                                GO TO 240-MATH.
    GO TO 240-FAIL.
240-MATH.
    IF RDM-WRI = 39 AND RDM-EL = 39 AND RDM-IN = 39
                                                GO TO 240-PASS.
    IF RDM-                          GO TO 240-PASS.
    GO TO 240-FAIL.
240-PASS.
    MOVE 2 TO RDM-STAND.
    GO TO 240-RDM-EXIT.
240-FAIL.
    MOVE "7" TO ERROR-CODE.
    MOVE D-MSGE8 TO LK-MSGE1.
240-RDM-EXIT.    EXIT.

250-CHECK-RDM-CRSES.
    MOVE 0 TO PASS  RD-PASS.
250-WRITING.
    IF RDM-WDEPT = PRF-PDEPT(T)  AND
       RDM-WCRSE = PRF-PCRSE(T)  AND
       RDM-WCRHR = PRF-PCRHR(T)
                MOVE 1 TO PASS  RD-PASS
                GO TO 250-RDM-CRSES-EXIT.
250-READING.
    IAND
       RDM-MCRHR = PRF-PCRHR(T)
                MOVE 1 TO PASS  RD-PASS.
250-RDM-CRSES-EXIT.    EXIT.

300-FTC-STUDENT.
    IF SMFICE = 0 AND SM-OTH-COL(1) = 0 AND SM-OTH-COL(2) = 0 AND
    = "1"
*                PERFORM 400-REQUISITE-CRSE THRU 400-REQUISITE-EXIT
*                GO TO 300-FTC-EXIT.
300-CONTINUE.
    IF (WOAT TAG = "B" OR "N") OR
       (OAT = 3 AND SMWRITING = 4) OR
       (OAT = 4 OR TST-PASS = 1
       MOVE 0 TO RD-STUDENT
       MOVE "NO Remedial/Developmental courses required." TO LK-MSGE1 AND MATH-HRS
                           MOVE 0 TO RD-STUDENT LK-RD
                           GO TO 310-RD-EXIT.
    IF SMWRITING = 8 OR (SMBASIC-TAG = "B" OR "C" OR "N")
                           MOVE 1 TO TST-PASS
                           GO TO 310-RD-EXIT.
*     IF WOAT = 2            GO TO     MOVE "You have to take AWPP test." TO LK-MSGE1
       MOVE "please see your advisor or a counselor." TO LK-MSGE2
       MOVE "2" TO ERROR-CO EXIT.

320-CHECK-RD-CRSES.
    IF (ENTRY-YEAR = 85 AND ENTRY-MONTH < 08) OR ENTRY-YEAR < 85
                    GO TO 320-CHECK-RD.
    PERFORM 325-F-EXIT.
    IF PASS = 1 OR PRF-FOUND = 0  GO TO 320-RD-CRSES-EXIT.
    PERFORM 340-GET-CCF-RDHRS THRU 340-CCF-RDHRS-EXIT.
    PERFORM 410-INITIALIZE-CRSE-TABLE T PERFORM 432-CHECK-SKILLS THRU 432-SKILLS-EXIT.
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    MOVE J TO JJ.
    PERFORM 330-PASS-RD-ENROLLED THRU 330-PASS-ENROLLED-EXIT.
    PERFORM 510-CHECK-COURSES THRU 510-EXIT.
320-RD-CRSES-EXIT.    EXIT.

325F X-QTR = 3    MOVE 1 TO PRE-QTR
                  COMPUTE PRE-YR = WYR - 1.
    IF  X-QTR = 4    MOVE 3 TO PRE-QTR
                     MOVE WYR TO PRE-YR
                          NEXT SENTENCE
      ELSE                30 TO 325-STANDARD-EXIT.
    ADD 1 TO X.
325-A.
    SUBTRACT 1 FROM X.
    IF X = 1   MOVE 0 TO CCF-X(1) X 021                    GO TO 325-A.
    MOVE X TO J.
325-B.
    SUBTRACT 1 FROM J.
    IF J = 1    GO TO 325-A.
    IF DEPT-CCF(1) = DEPT-CCF(X) AND
       CRSE-CC TO RD-STAND
                GO TO 325-STANDARD-EXIT.
    GO TO 325-B.
325-STANDARD-EXIT.    EXIT.

330-PASS-RD-ENROLLED.
    MOVE 0 TO J  X.
330-A.
    ADD 1 TO X.
    IF X = CRSE-CNT    MOVE 0 TO X
                       GO TO 330.
    MOVE 0 TO K.
330-B.
    ADD 1 TO K.
    IF K = 8    GO TO 330-A.
    IF T-DEPT1(K) = DEPT-CCF(X) AND
       330-A.
330-C.
    PERFORM 500-A THRU 500-RD-CRSE-EXIT.
330-PASS-ENROLLED-EXIT.    EXIT.

340-GET-CCF-RDHRS.
    MOVE 0 TO X.
340-A.
    ADD 1 TO X.
    IF X = CRSE-CNT    MOVE 0 TO X
                       GO TO 340-CCF-RDHRS-EXIT.
    IF DEPT-S-EXIT.    EXIT.

350-CHECK-RD-REQUIRED.
    MOVE 0 TO K  RD-REQ.
350-A.
    ADD 1 TO K.
    IF K = 8    MOVE 0 TO RD-REQ
                GO TO 350-RD-REQUIRED-EXIT.
    IF T-DEPT1(K) = SPACES   GO TO 350-A.
    IF T-DEPT1(K) = DEPT-RD  AND
       T-CRSE1(K) = CRSE-RD  AND
       T-CRHR1(K) = CRHR-RD
                MOVE 1 TO RD-REQ
                GO TO 350-RD-REQUIRED-EXID-EXIT.    EXIT.

360-RD-PREREQUISITE.
    MOVE 0 TO RD-REQ.
    MOVE T-DEPT1(K) TO PRF-DEPT.
    MOVE T-CRSE1(K) TO PRF-CRSE.
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    MOVE T-CRHR1(K) TO PRF-CRHR.
    PERFORM 100-READ-PRFT-RD  AND
       PRF-PCRSE(T) = CRSE-RD  AND
       PRF-PCRHR(T) = CRHR-RD
                    MOVE 1 TO RD-REQ
                    GO TO 360-RD-EXIT.
    GO TO 360-A.
360-RD-EXIT.    EXIT.

400-REQUISITE-CRSE.
    IF ERROR-CODE = "2" O          MOVE 0-MSGES TO LK-MSGE1
                     GO TO 400-REQUISITE-EXIT.
    MOVE DEPT-HLD TO PRF-DEPT.
    MOVE CRSE-HLD TO PRF-CRSE.
    MOVE CRHR-HLD TO PRF-CRHRORM 210-CHECK-PRF THRU 210-PRF-EXIT
          GO TO 400-REQUISITE-EXIT.
    MOVE 0 TO T  PRF-SW  PASS.
400-A.
    ADD 1 TO T.
    IF T > 3 AND PRF-SW    GO TO 400-A.
    IF PRF-PTYPE(T) NOT = "1"    GO TO 400-A.
    MOVE 1 TO PRF-SW.
    IF RDM-FOUND = 1 AND RDM-STAND = 2
       PERFORM 250-CHECK-RDM-CRSES THRU 250-RDM-CRSES-EXIT.
    IF PASS = 1    GO TO 400-REQUISITE-EXIT.
    PERFORM 200-PRF-PASS THRU 200-PRF-PASS-EXIT.
    IF PASS NOT = 1    GO TES TO LK-MSGE1
                       GO TO 410-RD-CRSE-EXIT.
    IF (SMBASIC-TAG = "C" OR "B" OR "N") OR
       (CMAT = SPACES OR TST-PASS = 1
                    MOVE 0 TO LK-RD
                    GO TO 410-RD-CRSE-EXIT.
    PERFORM 410-INITIALIZE-CRSE-TOLLED THRU 500-RD-CRSE-EXIT.
    PERFORM 510-CHECK-COURSES THRU 5,0-EXIT.
410-RD-CRSE-EXIT.    EXIT.

410-INITIALIZE-CRSE-TABLE.
    MOVE 0 TO J  CRSE70 CRSE71 CRSE80.
410-A.
    ADD 1 TO J.
    IF J = 8
                    MOVE 0 TO T-CRHR1(J) T-CRHR2(J).
    GO TO 410-A.
410-TABLE-EXIT.    EXIT.

420-GET-[illegible].
    IF SMWRITING = 4
       (HAVE "NO Rea                MOVE "011" TO T-DEPT1(J)
                    MOVE "070" TO T-CRSE1(J)
                    MOVE .5    TO T-CRHR1(J)
                    MOVE "Basic Writing 1" TO T-TITLE(J).
       (SMWRITING RHR)(J)
                    MOVE (There's Basic Writing) TO T-TITLE(J).
430-CHECK-LANG-EXIT.    EXIT.
430-READING.
    IF (RAN-HRS = 41,33 OR RT-STUDENT = 1    GO TO 430-LANG-EXIT.
    IF (SMREADING = 33 OR    TO T-CRHR1(J).
                    MOVE "Reading 1" TO T-TITLE(J).
                    GO TO 430-LANG-EXIT.
    IF (SMREADING = 23 AND SMREADING = 28) OR
       (SMLOGICAL = 16 AND SMLOGICAL = 2)
                 27 AND SMREADING = 36) OR
       (SMLOGICAL = 26 AND SMLOGICAL = 36)
                    ADD 1 TO J  (READ)
                    MOVE "008" TO T-DEPT1(J).
    GO TO 431-MATH-EXIT.
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    IF (SMALGEBRA-IN = 99 AND SMALGEBRA-LL = 99 AND SMARITHMETIC = 99
        AND (DEPT-HLD = 025)
        MOVE 1 TO TST-RQ
        MOVE "2" TO ERROR-CODE
        MO 1 TO J
                        MOVE "025" TO T-DEPT1(J)
                        MOVE "081" TO T-CRSE1(J)
                        MOVE  5    TO T-CRHR1(J)
                        MOVE "Intermediate Algebr          MOVE "Intermediate Algebra  TO T(J)
                        GO TO 431-MATH-EXIT.
    ADD 1 TO J  CRSE80.
    MOVE "025" TO T-DEPT1(J).
    MOVE "080" TO T-CRSE1(J).
    MOVD TO 431-MATH-EXIT.
    IF SMARITHMETIC  25  ADD 1 TO J  CRSE80
                        MOVE "025" TO T-DEPT1(J)
                        MOVE "080" TO T-CRSE1(J)
                            MOVE "Basic Mathmetics I" TO T-TITLE(J)
                        GO TO 431-MATH-EXIT.
    ADD 1 TO J  CRSE71.
    MOVE "025" TO T-DEPT1(J).
    MOVE "071" TO T-CRSE1(J).
    MOVE  3    TO T-CRHR1(J).
    MOVE "Basic Mathmetic II" TO T-TITLE(J).
431-MATH-EXIT.    EXIT.

432-CHECK-SKILLS.
    IF RD-STUDENT = 0 OR SMDEPT1(J)
                    MOVE "070" TO T-CRSE1(J)
                    MOVE  3    TO T-CRHR1(J)
                    MOVE "COL SKLS/CAREER PLAN" TO T-TITLE(J)
                    GO                MOVE  3    TO T-CRHR1(J)
                    MOVE "STUDY SKILLS  or" TO T-TITLE(J)
                    ADD 1 TO J
                    MOVE "086" TO T-DEPT1(J)
                    MOVE "070" TO T-CRSE1(J)
                    MOVE  3    TO T-CRHR1(J)
                    MOVE "COL SKLS/CAREER PLAN" TO T-TITLE(J)
                    GO TO 432-SKILLS-EXIT.
    IF (CRSE70 = 2 AND CRSE71 = 0 AND CRSE80 = 0) OR
       (CRSE71 = 3) OR
       (CRSE70 = 0 AND CRSE71 = 2 AND CRSE80 = 1) 01(J)
                    MOVE "Tutoring II" TO T-TITLE(J)
                    ADD 1 TO J
                    MOVE "008" TO T-DEPT1(J)
                    MOVE "072" TO T-CRSE1(J)
                    MOVE  3  ) OR
       (CRSE70 = 0 AND CRSE71 = 1 AND CRSE80 = 1)
                    ADD 1 TO J
                    MOVE "021" TO T-DEPT1(J)
                    MOVE "071" TO T-CRS1(J)
                    MOVE "070" TO T-CRSE1(J)
                    MOVE  3    TO T-CRHR1(J)
                    MOVE "COL SKLS/CAREER PLAN" TO T-TITLE(J)
                    GO T008" TO T-DEPT1(J)
                    MOVE "072" TO T-CRSE1(J)
                    MOVE  3    TO T-CRHR1(J)
                    MOVE "STUDY SKILLS  or" TO T-TITLE(J)
                    ADD NO CRSE71 = 2)
                    ADD 1 TO J
                    MOVE "021" TO T-DEPT1(J)
                    MOVE "070" TO T-CRSE1(J)
                    MOVE  1    TO T-CRHR1(J)
                    MOVE "Tutoring I"KILLS-EXIT.
    IF (CRSE70 = 0 AND CRSE71 = 0 AND CRSE80 = 1)
                    ADD 1 TO J
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                    MOVE "021" TO T-DEPT1(J)
                    MOVE "080" TO T-CRSE1(J)
                    MOVE  1    TO T-CRHR1(J)
                       MOVE  1    TO T-CRHR1(J)
                    MOVE "Tutoring III" TO T-TITLE(J)
                    ADD 1 TO J
                    MOVE "008" TO T-DEPT1(J)
                    MOVE "072" TO T-CRSE1(J)
                       MOVE "BASIC ORAL COM SKLS" TO T-TITLE(J)
                    GO TO 432-SKILLS-EXIT.
        IF (CRSE80 = 3)
                    ADD 1 TO J
                    MOVE "021" TO T-DEPT1(J)
                    MOVE "080" TO T-CRCRSE70 = 3 OR
          (CRSE70 = 2 AND CRSE71 = 0 AND CRSE80 = 0) OR
          (CRSE70 = 2 AND CRSE71 = 0 AND CRSE80 = 1) OR
          (CRSE70 = 2 AND CRSE71 = 1 AND CRSE80 = 0) OR
          (CRSE70 = 1 AND CRSE71 = 2 AND CRSE80 = 0)
                     ADD 1 TO J
                     MOVE "021" TO T-DEPT1(J)
                     MOVE "070" TO T-CRSE1(J)
                     MOVE  1    TO= 0) OR
          (CRSE70 = 1 AND CRSE71 = 1 AND CRSE80 = 1) OR
          (CRSE70 = 1 AND CRSE71 = 0 AND CRSE80 = 2) OR
          (CRSE71 = 3) OR
          (CRSE70 = 0 AND CRSE71 = 1 AND CRSE80 = 2) OR
          (CRSE70 = 0 AND CRSE71 = 2 AND CRSE800 AND CRSE71 = 2 AND CRSE80 = 1)
                     ADD 1 TO J
                     MOVE "021" TO T-DEPT1(J)
                     MOVE "071" TO T-CRSE1(J)
                     MOVE  1    ADD 1 TO J
                     MOVE "021" TO T-DEPT1(J)
                     MOVE "080" TO T-CRSE1(J)
                     MOVE  1    TO T-CRHR1(J)
                     MOVE "Tutoring III" TO T-TITLE(J).
432-SKILLS-EXIT.    EXIT.

500-RD-CRSE-ENROLLED.
    MOVE 0 TO J  X.
500-A.
    ADD 1 TO X.
    IF X   25    MOVE 0 TO X
                 GO TO 500-B.
    IF SMDEPT(X) = 0 OR SMDEPT(X) NOT NUMERIC   GO TO 500-A.
    IF SMCANCEL(X) = 1     GO TO 500-A.
    IF SMCRHR(X) = 0       GO TO 500-A.
    IF SMQTRCALL(X) NOT = LK-QTR  GO TO 500-A.
    IF SMDEPT(X)  086             GO TO 500-RD 350-RD-REQUIRED-EXIT.
    IF RD-REQ = 0   GO TO 500-A.
          ADD 1 TO J.
          MOVE J TO KK.
          MOVE SMDEPT(X) TO T-DEPT2(J).
    GO TO 500-RD-CRSE-DISPLAY.
    MOVE DEPT-HLD TO DEPT-RD.
    MOVE CRSE-HLD TO CRSE-RD.
    MOVE CRHR-HLD TO CRHR-RD.
    PERFORM 350-CHECK-RD-REQUIRED THRU 350-RD-REQUIRED-EXIT.
    IF RD-REQ = 0     GO TO 500-RD-CRSE-DISPLAY.
    ADD 1 TO J.
    MOVE DEPT-HLD  TO T-DEPT2(J).
    MOVE CRSE-HLD  TO T-CRSE2(J).
    MOVE CRHR-HLD  TO T-CRHR2(J).
    MOVE J TO KK.
500-RD-CRSE-DISPLAY.
    PERFORM 502-DISPLAY-TABLE THRU 502-DISPLAY-EXIT.
500-RD-CRSE-EXIT.    EXIT.
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502-DISPLAY-TABLE.
    MOVE 0 TO R.
    MOVE 12 TO ROW.
    MOVE 0 TO COL.
    CALL 'MOVCURSOR' USING COL, ROW.
    DISPLAY ' '.
    MOVE 13 TO ROW.
    CALL 'MOVCURSOR' USING COL, ROW.
502-A.
    ADD 1 TO R.
    IF R > 8    GO TO 502-DISPLAY-EXIT.
    IF T-DEPT1(R) = SPACES AND T-CRHR2(R) =
    GO TO 502-A.
502-DISPLAY-EXIT.    EXIT.

510-CHECK-COURSES.
    IF DEPT-HLD > 086    GO TO 510-MORE-RD.
    IF (DEPT-HLD = 008 AND (RET-STUDENT = 1 OR THRU-HRS > 41.99)) OR
       DEPT-HLD = 025 AND TO 510-MORE-RD.
    MOVE DEPT-HLD TO PRF-DEPT.
    MOVE CRSE-HLD TO PRF-CRSE.
    MOVE CRHR-HLD TO PRF-CRHR.
    PERFORM 100-READ-PRF THRU 100-PRF-EXIT.
    IF PRF-FOUND = 0    GO TO 510-MORE-RD.
    MOVE 4 TO T.
    MOVE D-MSGE2 TO LK-MSGE2
                        GO TO 510-EXIT.
    IF T > 1    GO TO 510-MORE-RD.
    IF PRF-PT(PE(T) = SPACES    GO TO 510-A.
    IF PRF-PT(PE(T) NOT = "1"    GO TO 510-A.
    MOVE 1 TO PRF-SW.
    IF CCF-SW = 0                1    GO TO 510-MORE-RD.
    MOVE CRSE-CNT TO I.
    ADD 1 TO I.
510-B.
    SUBTRACT 1 FROM I.
    IF I < 1    GO TO 510-A.
    IF (DEPT-CCF(I) = SPACES) OR (CRSE-CCF(I) = SPACES) OR
       CRHR-CCF(I) = 0)    GO TO 510-B.
    IF GRADE-CCF(I) = "A" OR "B" OR "C" OR "D" OR "E" OR "S"
                        NEXT SENTENCE
       ELSE             GO TO 510-B.
    IF TRCRT-CCF(I) = SPACES  MOVE CRHR-CCF(I)  TO PRF-PCRSE(T)  AND
       RHR-RHLD  = PRF-PCRHR(T)
                MOVE 1 TO RD-PASS    GO TO 510-MORE-RD.
    GO TO 510-B.
510-MORE-RD.
    COMPUTE JJ = JJ - KK.
    "IA courses required." TO LK-MSGE3.
510-EXIT.    EXIT.

520-ALTERNATE-COURSE.
    IF WS-CUR-HRS > 12
                        PERFORM 530-RD-PREREQUISITE THRU 530-RD-EXIT
                        GO TO 520-EXIT.
    IF ((CRSE(J) = SE(8) = 2)) AND
       (T-DEPT1(J) = 086 OR 008 OR 018) AND
       T-CRSE1(J) = 070 OR 072 OR 080))
I(X) = T-DEPT2(K) AND T-CRSE1(X  = T-CRSE2(K))    NEXT SENTENCE
                        GO TO 520-EXIT.
    GO TO 520-A.
520-EXIT.    EXIT.

530-RD-PREREQUISITE.
    IF DEPT-HLD > 086    MOVE 1 TO PRF-SW
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                        GO TO 530-RD-EXIT.
    MOVE    TO PRF-SW.
    MOVE  (EPT1(J)  TO PRF-DEPT.
    MOVE T-CRSE1(J)  TO PRF-CRSE.
    MOVE T-CRHR1(J)  TO PRF-CR          GO TO 530-RD-EXIT.
    IF T  1    GO TO 530-RD-EXIT.
    IF PRF-PT PE(T) = SPACES                GO TO 530-A.
    IF PRF-PT(PE(T) NOT = "1" AND "3"    GO TO 530-A.
530-B.
    IF PRF-PDEPT(T) = DEPT-HLD  AND
       PR-EXIT.    EXIT.

550-COURSE-PROGRESS.
    MOVE 0 TO I  PASS.
550-A.
    ADD 1 TO I.
    IF I  25    GO TO 550-PROGRESS-EXIT.
    IF SMDEPT(I) = 0 OR SMDEPT(I) NOT NUMERIC    IF DEPT-SM = PRF-PDEPT(T)  AND
       CRSE-SM = PRF-PCRSE(T)  AND
       SMCRHR(I) = PRF-PCRHR(T)
                MOVE 1 TO PASS
                GO TO 550-PROGRESS-EXIT.
    GO TO 550-A.
550-PROGRESS-EXIT.    EXIT.

ABORT-JOB.
    CLOSE CCF PRF RDMSGF.
    STOP RUN.
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